

## WHAT IS CLAIMED IS

Sub C7 1. A forward amplifier signal equalization circuit for use with a forward amplifier for two-way coaxial cable systems, of the type having a distribution centre distributing forward signals, and a plurality of coaxial cable lines extending therefrom, and a plurality of tap ports connecting signals from the coaxial cable line to respective terminals, and said coaxial cable system further having reception facilities for receiving return signals from said cable system, and wherein said forward signals and return signals passing along said cable system in opposite directions are progressively attenuated in signal strength, said system having forward amplifiers at spaced intervals therealong, for receiving forward signals passing along said coaxial cables, and amplifying the same, the equalization circuit comprising;

a signal equalization circuit connectable in said forward amplifier for equalizing the signal strengths of signals across the wave band of said forward signals and having receptacles for receiving plug in circuit components for varying the characteristics of said equalization circuit, and,

a plurality of plug in attenuator components for said signal equalization circuit, each of said attenuator components being of identical design and said plurality of said attenuator components being adapted to interfit with said signal equalization circuit interchangeably, and said attenuator components having a range of varying performance characteristics whereby a respective said plug in

attenuator component can be selected and plugged into said signal equalization circuit to produce the performance specifications desired for the forward amplifier at a predetermined location along said cable system.

2. A forward amplifier signal equalization circuit for use with a forward amplifier for two-way coaxial cable systems as claimed in claim 1, wherein a return amplifier is adapted to be connected to said cable system around a respective said forward amplifier, whereby said forward signals can pass through said forward amplifier in a forward direction, and said return signals can pass through said return amplifier around said forward amplifier in a return direction.

3. A forward amplifier signal equalization circuit for use with a forward amplifier for two-way coaxial cable systems as claimed in claim 2, in which the return amplifier incorporates a return signal equalizer circuit, adapted to receive one of a plurality of plug in attenuator components having characteristics which are predetermined, whereby the characteristics of said return amplifier can be adjusted, by interchanging said attenuator component in said return signal equalizer circuit.

4. A forward amplifier signal equalization circuit for use with a forward amplifier for two-way coaxial cable systems as claimed in claim 3, wherein said

signal equalizer incorporates PAD circuit receptacles adapted to receive one of a plurality of plug-in attenuator components, wherein the plug-in attenuator components for the forward signal equaliser circuit, and for the return amplifier circuit, are all of identical design, and are interchangeable between the forward signal equaliser circuit and the return amplifier circuit.

5. A forward amplifier signal equalization circuit for use with a forward amplifier for two-way coaxial cable systems as claimed in claim 4, wherein said forward signal equalizer comprises a PAD circuit receptacle having first, second, and third connections, said first connection being connected to receive forward signals, and to a capacitor and an inductance, said second connection being connected to said transformer resistor, and said third connection being connected to ground through a capacitor and an inductance, and to a mid-point of said transformer.

6. A method of setting the characteristics of a signal equalizer for a coaxial cable system, of the type having a distribution centre distributing forward signals, and a plurality of coaxial cable lines extending therefrom, and a plurality of tap ports connecting signals from the coaxial cable line to respective terminals, and wherein forward signals passing along said coaxial cable system are progressively attenuated in signal strength, said coaxial cable system having

signal amplifiers at spaced intervals there along, for receiving said forward signals passing along said coaxial cables, and amplifying the same, and equalizers at respective amplifiers for equalizing the strengths of said signals across their signal wave band width, said equalizers having receptacles for receiving plug in circuit components having varying characteristics, for producing varying levels of signal strength equalization and, comprising the steps of;

measuring the strength of said forward signals passing through a said forward signal amplifier and equalizer;

10 selecting a plug in attenuator component having the characteristics desired for the signal strength measured at that location ;

plugging said selected attenuator in to the respective equalizer whereby to produce the performance specifications specific for said forward signals desired at a predetermined location along said a coaxial cable system.

7. A method as claimed in claim 6 and further including the steps of measuring said signal strength across said forward signal band width to determine the attenuation of said forward signals at various frequencies in said band width.

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9. A method as claimed in claim 8 and including the steps of passing return signals through a return amplifier around said forward amplifier in a return direction.

9. A method as claimed in claim 8 and including the steps of passing return signals through a return amplifier around said forward amplifier in a return direction.

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